



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,237	08/13/2001	Stephen F. Gass	SDT 309	8812

27630 7590 11/01/2006
SD3, LLC
25977 S.W. Canyon Creek Road, Suite G
WILSONVILLE, OR 97070

EXAMINER

ALIE, GHASSEM

ART UNIT PAPER NUMBER

3724

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,237

Applicant(s)

GASS ET AL.

Examiner

Ghassem Alie

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 20-22 and 28-3-35 is/are pending in the application.
- 4a) Of the above claim(s) 4-9, 22, 29, 31, 33, and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 20, 21, 28, 30, 32, and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/25/06, 08/11/06</u> | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election of invention I (claims 2, 3, and 11) and Species I (claims 32, 24) on 08/11/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 4-9, 22, 29, 31, 33, and 35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (4,117,752) in view of Mowery, Jr (2,785,710), hereinafter Mowery, and in further view of Razzano (6,564,909). Regarding claim 20, Yoneda teaches a woodworking machine including a cutting tool 14 for cutting workpieces, a motor 10 configured to drive the cutting tool 14, and detection system configured to detect a dangerous condition between a person and the cutting tool 14. Yoneda also teaches a reaction system 20 controllable to stop the cutting tool 14 if the dangerous condition is detected by the detection system. See Figs. 1-5 and col. 2, lines 14-65 and col. 3, lines 14-26 in Yoneda. Yoneda does not teach a control

Art Unit: 3724

system configured to determine the operability of the reaction system without having to operate the reaction system.

Yoneda teaches a brake mechanism 20 for the saw 14. Yoneda teaches that the brake mechanism is a clamp brake. Mowery teaches a brake mechanism that includes brake shoes 27. See Figs. 1-2 and col. 1, lines 70-73 and col. 2, lines 1-5 in Mowery. It would have been obvious to a person of ordinary skill in the art to replace Yoneda's brake mechanism with the brake mechanism, as taught by Mowery, since both the brake mechanism in Yoneda and the brake mechanism in Mowery are functionally equivalent and both stop the saw from rotating.

Razzano teaches a brake mechanism or a reaction system including brake pad 1 for stopping rotation of disk 2. Razzano also teaches a control system 32 configured to determine the operability of the reaction system without having to operate the reaction system. It should be noted that the wear of the brake pad 1 or the friction block 8 is monitored by the control system 32 at all times which also includes the time that the reaction system is not operating. See col. 1, lines 15-20 and col. 3, lines 1-50. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified by Mowery, with the control system, as taught by Razzano in order to monitor the brake shoes and detect the wear of the brake shoes and prevent possible injuries.

Regarding claim 34, Yoneda teaches everything noted above including that the reaction system is controllable to disable the cutting tool by stopping the cutting tool 14.

5. Claims 1, 11, 21, 28, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda in view of Mowery and in further view of Razzano and Doherty (6,235,195). Regarding claim 1, Yoneda teaches a woodworking machine including a cutting

Art Unit: 3724

tool 14 for cutting workpieces, a motor 10 configured to drive the cutting tool 14, and detection system configured to detect a dangerous condition between a person and the cutting tool 14. Yoneda also teaches a reaction system 20 controllable to stop the cutting tool 14 if the dangerous condition is detected by the detection system. See Figs. 1-5 and col. 2, lines 14-65 and col. 3, lines 14-26 in Yoneda. Yoneda does not teach a control system configured to determine the operability of the reaction system without having to operate the reaction system and to disable the motor if the reaction system is inoperable.

Yoneda teaches a brake mechanism 20 for the saw 14. Yoneda teaches that the brake mechanism is a clamp brake. Mowery teaches a brake mechanism that includes brake shoes 27. See Figs. 1-2 and col. 1, lines 70-73 and col. 2, lines 1-5 in Mowery. It would have been obvious to a person of ordinary skill in the art to replace Yoneda's brake mechanism with the brake mechanism, as taught by Mowery, since both the brake mechanism in Yoneda and the brake mechanism in Mowery are functionally equivalent and both stop the saw from rotating.

Razzano teaches a brake mechanism or a reaction system including brake pad 1 for stopping rotation of disk 2. Razzano also teaches a control system 32 configured to determine the operability of the reaction system without having to operate the reaction system. It should be noted that the wear of the brake pad 1 or the friction block 8 is monitored by the control system 32 at all times which also includes the time that the reaction system is not operating. See col. 1, lines 15-20 and col. 3, lines 1-50. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified by Mowery, with the control system, as taught by Razzano in order to monitor the brake shoes and detect the wear of the brake shoes and prevent possible injuries.

Yoneda, as modified above, teaches that the control system is configured to determine the operability of the reaction system without having to operate the reaction system. Yoneda, as modified by Razzano, teaches that if the reaction system is not operable a warning signal is generated. See lines 15-20 in Razzano. The warning signal is generated in the case that the brake shoes wear beyond the threshold. This is also taught in Kobayashi et al. (3,716,113). Yoneda, as modified above does not teach that the control system disables the motor if the reaction system is not operable. However, the use of control system to generate a warning signal in the case of emergency or to disable the motor instead of generating a warning signal in the case of emergency is well known in the art such as taught by Doherty. Doherty teaches a control system that generates a warning signal and disables the motor 80 in the case of inoperability of the safety panel that covers a machine. See Figs. 1-3 and col. 3, lines 40-67 and col. 4, lines 1-67 in Doherty. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified above, with the control system that generates warning signal and shuts down the motor in the case that the reaction system is not operable. Because, simultaneously shutting down the motor and generating a warning signal improve the reaction system and safety of the machine.

Regarding claim 11, Yoneda, as modified by above, teaches everything noted above including that the brake mechanism or the reaction system 20 is adapted to be electrically coupled to the control system, as modified by Razzano and Doherty, and where the control system is configured to disable the motor if the brake mechanism or the reaction system is not coupled to the control system.

Regarding claim 21, Yoneda, as modified above, teaches everything noted above including that the control system is adapted to at least check a portion of the brake system or the reaction system to verify that the portion of the brake system or the reaction system is operational. Yoneda's control system, as modified by above, tests the braking system as the whole, which also includes a portion of the braking system. Yoneda's control system, as modified by above, also is not running or actuating the motor if the brake system or the reaction system 20 is not operational.

Regarding claims 28 and 30, Yoneda as modified above, teaches everything noted above including a reaction system adapted to perform a specified action upon detection of a dangerous condition and a self-test system adapted to test operability of the brake system.

Regarding claim 32, Yoneda teaches everything noted above including that the reaction system is controllable to disable the cutting tool by stopping the cutting tool 14.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda in view of Mowery, Razzano, and Doherty, as applied to claim 1, and in further view of Balban (3,863,208). Regarding claims 2 and 3, Yoneda, as modified above, teaches everything noted above except that the reaction system includes a capacitor adapted to store electrical charge and to trigger the disabling of the cutting tool upon discharge of the at least part of the electrical charge and where the control system is configured to determine the capacitance of the capacitor. Yoneda, as modified above, also fails to expressly teach that the reaction system includes a fusible member and where the control system is configured to determine the condition of the fusible member. Yoneda, as modified above, teaches that the motor is disabled if the brake or the reaction system does not properly function. Yoneda, as

Art Unit: 3724

modified above, also teaches that the electric circuit provides the single for disabling the motor. Yoneda does not expressly teach that electric circuit has a capacitor that discharges part of it discharge for triggering the disabling of the cutting tool. However, Balban teaches a system to monitor an electric circuit including a sensing portion for circuit malfunctions and provide a warning system to the operator vehicle. Balban also teaches a control system that monitors the electric charge level in the capacitor of a reaction system. Balban also teaches that the capacitor triggers the firing circuit responsible for inflating a confinement adjacent the vehicle steering wheel. Balban also teaches that reaction system includes a fusible member F1-F4 and where the control system is configured to determine the condition of the fusible member. It should be noted that the control system monitors the whole electric circuit for malfunctioning. Therefore, the condition of fuse of the reaction system inherently is determined by the control system. See Figs. 1-4 and col. 2, lines 21-47 and col.3, lines 42-58 in Balban. It would have been obvious to one skilled in the art at the time of the invention to equip Yoneda's reaction system, as modified above, with the capacitor and fuse, as taught by Balban, in order to disable the cutting tool with an electric circuit that can be monitored for malfunctions and consequently enhance the safety system of the cutting tool.

Response to Amendment

7. The declaration filed on 04/25/06 under 37 CFR 1.131 has been considered but is ineffective to overcome the Razzano (6,564,909) reference. The scope of the declaration is not commensurate with the scope of the claims. In this case, neither of the provisional application numbers 60/157,340 and 60/182,866 disclose the claimed invention. For example, the provisional applications fail to disclose a control system that configured to

Art Unit: 3724

determine the operability of the reaction system without having to operate the reaction system and disable the motor if the reaction system is inoperable, as set forth in claims 1, 20, 28, and 30. The provisional applications also do not disclose that the control system is configured to determine the capacitance of the capacitor or the electrical charge stored on the capacitor, as set forth respectively in claims 2 and 3. The provisional applications also do not disclose that the control system is configured to disable the motor if the reaction system is not coupled to the control system, as set forth in claim 11, and the control system adapted not to actuate the motor unless the portion of the reaction system is operational, as set forth in claim 21. The claimed subject matter has not been clearly disclosed in the provisional applications. Therefore, the effective date for the claimed subject matter is 08/14/2000 which is after the filing date of the U.S. Patent (6,564,909).

Applicant's argument that Razzano should not be considered because it is outside the proper scope and content of the art is not persuasive. Razzano teaches a brake mechanism similar to the brake mechanism in Yoneda and Mowery, which includes a brake pawl for stopping a rotating member. Therefore, both brake mechanisms functionally equivalent and art-recognized equivalents. Therefore, the self-testing feature of one of the braking mechanism can be use with the other braking mechanism since, both braking mechanisms function the same and operate in the same manner.

Applicant's argument that Razzano fails to teach a control system as recited in claim 20 is not persuasive. The control unit 32 detects the wear of the block 8 of friction material at all time. See col. 3, lines 27-34. In order for the detection circuit to find the difference in

potential between the terminals 30 and 35, the friction block 8 does not have to operate or to be actuated. See col. 17-27 and Fig. 6 in Razzano.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information

Art Unit: 3724

for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GA/ga

October 27, 2006



BOYER D. ASHLEY
SUPERVISORY PATENT EXAMINER